

WHAT IS CLAIMED IS:

1. A glass composition of a multicomponent oxide glass manufactured by melting glass raw materials, comprising:

10 ppm or more of at least one type of a polyvalent element;
minimum valence cations of the polyvalent element in a ratio of a minimum valence cation content to a total polyvalent element content of 5 to 98% in mass ratio; and
0.01 to 2 μ l/g (0°C, 1 atm) of helium.

2. A glass composition according to claim 1, further comprising at least one of:

1 ppm or more in mass ratio of at least one component selected from the group consisting of F, Cl, and SO₃; and
10 ppm or more in mass ratio of OH.

3. A glass composition according to claim 1, wherein a ratio of the minimum valence cation content is higher by 0.1 to 40% in mass ratio compared to the ratio of a glass composition manufactured by melting in an oxygen-containing atmosphere.

4. A glass composition according to claim 1, wherein 1 ppm or more of cations of the polyvalent element are existent.

5. A glass composition according to claim 1, wherein the

polyvalent element is at least one element selected from the group consisting of V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Y, Zr, Mo, Rh, Ag, Cd, Sn, Sb, Te, Ti, Pt, Au, and Bi.

6. A glass composition according to claim 1, wherein the polyvalent element is Sn, and a ratio of a divalent cation content of Sn to a total Sn content is 20 to 50% in mass ratio.

7. A glass composition according to claim 1, wherein the polyvalent element is Sb, and a ratio of a trivalent cation content of Sb to a total Sb content is 70% or more in mass ratio.

8. A glass composition according to claim 1, wherein the polyvalent element is As, and a ratio of a trivalent cation content of As to a total As content is 60% or more in mass ratio.

9. A glass composition according to claim 1, wherein the polyvalent element is Fe, and a ratio of a divalent cation content of Fe to a total Fe content is 30% or more in mass ratio.